

# COL12A1 (H-280): sc-68862

## BACKGROUND

Collagen Type XII is a 3,063 amino acid protein encoded by the human gene COL12A1. Collagen Type XII belongs to the fibril-associated collagens with interrupted helices (FACIT) family. Collagen Type XII is known to interact with type I collagen-containing fibrils. The COL1 domain is thought to be associated with the surface of the fibrils, while the COL2 and NC3 domains may be localized in the periferibrillar matrix. Collagen Type XII has three identified isoforms (named 1, 2 and 4). Isoform 1 is the long form of the protein, while isoforms 2 and 4 are missing sequences found in isoform 1. Collagen Type XII is found in Collagen Type I-containing tissues: both isoform 1 and isoform 2 appear in amnion, chorion, skeletal muscle, small intestine and cell culture of dermal fibroblasts, keratinocytes and endothelial cells. Only isoform 2 is found in lung, placenta, kidney and a squamous cell carcinoma cell line. Isoform 1 is also present in the corneal epithelial Bowman's membrane (BM) and the inter-fibrillar matrix of the corneal stroma, but it is not detected in the limbal BM.

## CHROMOSOMAL LOCATION

Genetic locus: COL12A1 (human) mapping to 6q13; Col12a1 (mouse) mapping to 9 E1.

## SOURCE

COL12A1 (H-280) is a rabbit polyclonal antibody raised against amino acids 1861-2140 mapping within an internal region of Collagen Type XII of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

COL12A1 (H-280) is recommended for detection of Collagen Type XII of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

COL12A1 (H-280) is also recommended for detection of Collagen Type XII in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for COL12A1 siRNA (h): sc-72958, COL12A1 siRNA (m): sc-72959, COL12A1 shRNA Plasmid (h): sc-72958-SH, COL12A1 shRNA Plasmid (m): sc-72959-SH, COL12A1 shRNA (h) Lentiviral Particles: sc-72958-V and COL12A1 shRNA (m) Lentiviral Particles: sc-72959-V.

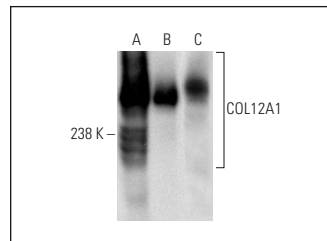
Molecular Weight of COL12A1: 333 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263, HeLa whole cell lysate: sc-2200 or ACHN whole cell lysate: sc-364365.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



COL12A1 (H-280): 68862. Western blot analysis of COL12A1 expression in CCD-1064Sk (A), HeLa (B) and ACHN (C) whole cell lysates.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

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Try **COL12A1 (A-11): sc-166020**, our highly recommended monoclonal alternative to COL12A1 (H-280).